

Application Number 10/628,885
Amendment dated October 22, 2008
Response to Office Action mailed July 22, 2008

REMARKS

This amendment is responsive to the Office Action dated July 22, 2008. Applicant has amended claims 1, 9, 19, and 22. Claims 1-4, 6-15, 19-24, 26-35, and 56 are pending.

Claim Rejection Under 35 U.S.C. § 103

In the Office Action, the Examiner rejected claims 1-3, 6-11, 15, 22-24, 26-31, 35, and 56 under 35 U.S.C. § 103(a) as being unpatentable over Valois (US 2004/0260818, hereinafter "Valois") in view of Delany (US 2002/0156879, hereinafter "Delany"). The Examiner also rejected claim 4 under 35 U.S.C. § 103(a) as being unpatentable over Valois as in view of Mitra (US 6,973,460, hereinafter "Mitra"). The Examiner further rejected claims 12-14, 19-21 and 32-34 under 35 U.S.C. § 103(a) as being unpatentable over Valois in view of Delany and further in view of Nelson (US 6,243,713, hereinafter "Nelson"). Applicant respectfully traverses the rejection to the extent such rejections may be considered applicable to the claims as amended. The applied references fail to disclose or suggest the inventions defined by Applicant's claims, and provide no teaching that would have suggested the desirability of modification to arrive at the claimed invention.

Applicant has amended claims 1, 19, and 22 for the purpose of clarification. The amendments to claim 1, for example, clarify that the regular expression is a fine-grain access control attribute defining access control rights for members of the class to a portion of the resource provided by the device. That is, in the context of claim 1, a device stores, for a class of clients, an access control attribute and an associated regular expression. The access control attribute defines access control rights to all of the configuration data for a particular resource for the particular class of users. The associated regular expression defines access control rights to only a portion of the configuration data for that resource for the particular class of users. In this sense, the access control attribute is "coarse-grain" and the regular expression is "fine-grain." Similar amendments have been made to claims 19 and 22.

Applicant respectfully disagrees that one of ordinary skill in the art would have found any reason to combine the disclosures of Valois and Delany. However, even if one of ordinary skill in the art were to combine the references as suggested by the Office Action, one would not have arrived at the requirements of, e.g., Applicant's claim 1 as amended. Although Valois may

Application Number 10/628,885
Amendment dated October 22, 2008
Response to Office Action mailed July 22, 2008

disclose access control lists (ACLs) and Delany may disclose a class of clients, as asserted by the Examiner, the combination of Valois and Delany still fails to disclose the requirements of Applicant's claim 1 as amended.

Applicant's claim 1 as amended requires an access control attribute, and an associated regular expression specifying a textual pattern. Claim 1 as amended further requires that the access control attribute is a coarse-grain access control attribute that specifies access control rights for members of the class to configuration data for a resource provided by the device, and that the regular expression specifies fine-grain access control rights for the members of the class to only a portion of configuration data for the resource. The Office Action cited Valois as disclosing these requirements in that Valois at ¶ [0057] teaches the use of regular expressions. To the extent that Valois discloses regular expressions, the disclosure of Valois is limited to teaching the use of GREP (global regular expression print) to search files. Valois, ¶ [0057].

Valois lacks any teaching whatsoever that regular expressions are in any way associated with the access control lists (ACLs) or any other access control mechanism whatsoever. Instead, Valois teaches that GREP is used as part of a test script to determine whether a hostname is the same as a file name. Valois, ¶ [0056]; FIG. 2, elts. 22, 24. Valois in no way teaches that a regular expression is associated with an access control attribute that specifies fine-grain access control rights for the members of the class to only a portion of the configuration data for the resource provided by the device as required by Applicant's claim 1. That is, even if the ACLs of Valois could properly be analogized to the access control attributes required by Applicant's amended claim 1, Valois still fails to disclose the elements required by claim 1 because Valois fails to disclose that the regular expression is associated with or in any way used as an access control attribute, let alone as specifying fine-grain access control rights for the members of the class to only a portion of the configuration data for the resource provided by the device, as required by claim 1. Valois fails to disclose that GREP in any way defines fine-grain access control rights for members of the class to a portion of the resource provided by the device. To quite the contrary, Valois only teaches that GREP is used to search files. Valois, ¶ [0057]. Therefore, Valois fails to disclose these requirements of Applicant's claim 1.

Delany fails to overcome these shortcomings of Valois. Delany at ¶ [0118], for example, describes the use of policies to control access to groups of web servers. In order to define and

Application Number 10/628,885
Amendment dated October 22, 2008
Response to Office Action mailed July 22, 2008

implement the policy, Delany teaches that policies specifies hostnames and URL prefixes which are then compared to incoming URLs to detect matches. This form of policy definition as taught by Delany does not teach or suggest use of a regular expression as an access control attribute that specifies fine-grain access control rights for the members of the class to only a portion of the configuration data for the resource provided by the device. Thus, the only teaching with respect to use of regular expressions is provided by Valois, and such teachings describe the use only for searching for files. Thus, even if Valois were modified in view of Delany, the resultant system would use ACLs and regular expressions in the manner taught by Valois. Valois in view of Delany does not teach or suggest authorization data that defines for each class of clients: (i) an access control attribute that specifies coarse-grain access control rights for members of the class to configuration data for a resource provided by the device, and (ii) an associated regular expression specifying a textual pattern that specifies fine-grain access control rights for the members of the class to only a portion of the configuration data for the resource provided by the device, as required by claim 1.

Applicant's claim 1 as amended also requires evaluating a command (received from a client, wherein the command requests access to configuration data for the resource of the device) using the retrieved regular expression to determine whether the command matches the textual pattern specified by the retrieved regular expression. Valois lacks any teaching whatsoever of evaluating a command from a client, wherein the command requests access to the portion of the configuration data for the resource of the device. Delany fails to disclose evaluating the command using the retrieved regular expression at all, let alone to determine whether the command matches the textual pattern specified by the retrieved regular expression as required by Applicant's claim 1. This is necessarily so, since Delany lacks any teaching of a regular expression at all, as discussed above. The Office Action cited Delany at ¶ [0118], ll. 19-26. Although this section discusses a "pattern," it says nothing of a regular expression specifying a textual pattern, nor does it say anything about evaluating a command that requests access to configuration data of a device, as required by Applicant's claim 1 as amended. Instead, the section is referring to the format of an incoming URL and whether the incoming URL matches the URL prefixes and hostnames defined by the policy. This would suggest that regular expressions are not used for pattern matching, but instead the policies define strings of

Application Number 10/628,885
Amendment dated October 22, 2008
Response to Office Action mailed July 22, 2008

hostnames and URL prefixes. Further, Delany at ¶ [0118] describes application of policies by a web gate so as to control network access to particular groups of web servers. Accordingly, Valois in view of Delany fails to teach, suggest, or disclose this requirement of Applicant's claim 1 as amended.

Further, as discussed above, the policies and URL patterns referred to at ¶ [0118] related to controlling network access to groups of servers. With respect to actually controlling access to configuration data for resources of a network device, the Examiner refers to Delany at ¶ [0118] where Delany describes a Configure Tab 416. However, here, Delany describes use of privileges to control whether a user can change the configuration data. In this regard, Delany describes use of privileges and Valois describes use of access control lists (ACLs), both of which at best describe a coarse-grain access control. The combination of references fail to provide any teaching whatsoever for use of a textual pattern to define and additional fine-grain access control rights for the members of the class to only a portion of the configuration data for the resource provided by the device.

In sum, even if Valois were modified in view of Delany, the resultant system would use ACLs and privileges to control user access and would possibly use the Delany policies to control access to network servers. Applicant is at a loss as to how the Examiner can maintain that the resultant system would utilize authorization data that defines for each class of clients: (i) an access control attribute that specifies coarse-grain access control rights for members of the class to configuration data for a resource provided by the device, and (ii) an associated regular expression specifying a textual pattern that specifies fine-grain access control rights for the members of the class to only a portion of the configuration data for the resource provided by the device, as required by claim 1.

Mitra and Nelson fail to overcome the limitations of Valois and Delany. Mitra was cited only for the purpose of disclosing a class syntax. Nelson was cited for the purpose of disclosing preprocessing a regular expression. Mitra and Nelson each lack any teaching of a regular expression that defines fine-grain access control rights for members of the class to a portion of the resource provided by the device as required by Applicant's claim 1 as amended. Therefore, although Applicant does not acquiesce as to the Office Action's interpretations of Mitra and

Application Number 10/628,885
Amendment dated October 22, 2008
Response to Office Action mailed July 22, 2008

Nelson, even if this interpretation were correct, the applied references as a whole still fail to teach, suggest, or disclose the requirements of Applicant's claim 1 as amended.

Applicant's other independent claims, i.e. claims 19 and 22, include certain similar requirements to those of claim 1. Therefore similar arguments apply to claims 19 and 22 as respectively amended. Therefore, Valois in view of Delany, and in further view of Mitra and Nelson, fail to teach, suggest, or disclose the requirements of Applicant's independent claims 1, 19, and 22 as respectively amended. The dependent claims incorporate the requirements of the respective base claims, therefore claims 2-4, 6-15, 20-21, 23-24, 26-35, and 56 are likewise patentable. Moreover, the dependent claims include a number of requirements likewise not taught or suggested by the applied references.

For example, claim 2 requires wherein controlling access comprises allowing access to the configuration data when the access control attribute denies access to the resource and the textual pattern of the regular expression matches the command. That is, claim 2 requires allowing access to the configuration data by the client of claim 1. The Office Action cited Valois, ¶ [0067] in the rejection of claim 2. The cited portion of claim 2 says nothing of allowing a client to access configuration data. Instead, Valois teaches that a "pass" is given for a test script if all ACL definitions are consistent with ACL references. In particular, Valois fails to disclose that access is allowed when the access control attribute denies access and the textual pattern of the regular expression matches the command, as required by claim 2. In this way the fine-grain textual pattern can be viewed as overriding the denial of access specified by the coarse-grain attribute. **The Valois disclosure cited by the Examiner with respect to claim 2 has no relevance whatsoever to these claim elements.** Applicant respectfully request the Examiner review the elements of claim 2 and further explain the rejection. Further, Delany fails to overcome this limitation of Valois. Therefore, Valois in view of Delany fails to disclose the requirements of claim 2. Similar arguments apply with respect to claims 3, 23, and 24 (where claims 3 and 24 require denying access when the textual pattern of the regular expression matches the command even though the coarse-grain access control right grants access).

Applicant's claim 10 requires wherein the objects (of claim 9) have respective textual labels and the regular expression defines the textual pattern to match the textual labels of a set of one or more of the objects within the configuration hierarchy. The Office Action asserted that

Application Number 10/628,885
Amendment dated October 22, 2008
Response to Office Action mailed July 22, 2008

Valois teaches regular expressions that define a textual pattern to match textual labels. However, Valois only teaches GREP. Moreover, Valois teaches that GREP is used to search files, not to specify a textual pattern that matches textual labels. One of ordinary skill in the art would not have applied GREP, as taught by Valois, to match labels of a set of one or more objects within a configuration hierarchy. Therefore Valois in view of Delany fails to teach, suggest, or disclose these requirements of Applicant's claim 10. Similar arguments apply with respect to claim 30.

Claim 11 requires wherein evaluating the command comprises applying the regular expression to the command to determine whether the command specifies any of the objects within the set. Yet again, Valois in no way teaches a regular expression that one of ordinary skill in the art could apply to a command received from a client. Therefore Valois in view of Delany fails to disclose the requirements of claim 11. Similar arguments apply with respect to claim 31.

For at least these reasons, the Office Action has failed to establish a prima facie case for non-patentability of Applicant's claims 1-4, 6-15, 19-24, 26-35, and 56 under 35 U.S.C. § 103(a). Applicant therefore respectfully requests withdrawal of this rejection.

CONCLUSION

All claims in this application are in condition for allowance. Applicant respectfully requests reconsideration and prompt allowance of all pending claims. Please charge any additional fees or credit any overpayment to deposit account number 50-1778. The Examiner is invited to telephone the below-signed attorney to discuss this application.

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